

PATENT COOPERATION TREATY

REC'D 19 APR 2005

From the
INTERNATIONAL SEARCHING AUTHORITY

WIPO PCT

To:

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/IB2005/050140

International filing date (day/month/year)
12.01.2005

Priority date (day/month/year)
15.01.2004

International Patent Classification (IPC) or both national classification and IPC
B41J3/36

Applicant
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1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1b/s(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or
Industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	7-19
	No: Claims	1-6,20-22
Inventive step (IS)	Yes: Claims	8-19
	No: Claims	1-7,20-22
Industrial applicability (IA)	Yes: Claims	1-22
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V.

- 1 Reference is made to the following documents:

D1 : US 6 357 939 B1 (BARON JOHN M) 19 March 2002 (2002-03-19)

D2 : WO 03/006249 A (PRINT DREAMS EUROPE AB; WALLING, ALEX, M)
23 January 2003 (2003-01-23)

2 INDEPENDENT CLAIM 1

- 2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D1 discloses (the references in parentheses applying to this document)
an electronic brush (Fig. 4) for dispensing ink onto a writable medium (201), the electronic brush comprising:

at least one ink dispenser (302) coupled to the electronic-brush housing (301);
an electronic-brush scanner (304) coupled to the electronic-brush housing; and
a controller (*the known printer must, of course, have a controller: cf. col. 6, lines 12-17*) in electrical communication with the ink dispenser (302) and the electronic-brush scanner (304);

wherein a position of the electronic brush is determined based on at least one position indicator (see claim 4) in a first portion of a dispensed image (claim 7) that is scanned by the electronic-brush scanner (304) and communicated to the controller (col. 7, lines 39-42), and

wherein an ink-dispense signal is sent from the controller to the ink dispenser based on the determined electronic-brush position.

Therefore, all the technical features of claim 1 are known from document D1.

- 2.2 These features are also known from document D2.

3 INDEPENDENT CLAIM 20

- 3.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 20 is not new in the sense of Article 33(2) PCT.

Document D1 discloses (the references in parentheses applying to this document)

a system *suitable* for dispensing ink (Fig. 3, Fig. 4) on a writable medium (201), the system comprising:

means *suitable* for scanning (claim 4) a first position indicator in a first portion of a dispensed image on the writable medium (201);

means *suitable* for determining a position of an electronic brush (Fig. 4) based on the scanned position indicator (claims 1, 4, 5);

means *suitable* for modifying image data to embed a second position indicator in a second portion of the image based on the determined position of the electronic brush (*the known printer is, of course, be suitable for printing the second position indicator when it is programmed accordingly*); and

means *suitable* for dispensing the second portion of the image including the second position indicator onto the writable medium (*this is also a question of programming the known printer accordingly*).

Therefore, all the technical features of claim 20 are known from the document D1.

- 3.2 The same is true in comparison to document D2.

4 DEPENDENT CLAIMS 2-7, 21, 22

Dependent claims 2-7, 21, 22 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).

5 INDEPENDENT CLAIM 8

- 5.1 Document D1, which is considered to represent the most relevant state of the art, discloses (the references in parentheses applying to this document)

a method of dispensing ink on a writable medium (201), the method comprising:
scanning a first position indicator in a first portion of a dispensed image on the writable medium (col. 7, lines 32-35; claims 6 and 7);
determining a position of an electronic brush based on the scanned position indicator (col. 5, lines 56-60).

From this, the subject-matter of independent claim 8 differs in that the method additionally comprises:

modifying image data to embed a second position indicator in a second portion of the image based on the determined position of the electric brush; and
dispensing the second portion of the image including the second position indicator onto the writable medium.

5.1.1 The subject-matter of claim 8 is therefore novel (Article 33(2) PCT)

The problem to be solved by the present invention may be regarded as providing an improved method of dispensing ink on a writable medium, whereby the position of an electronic brush dispensing the ink can be determined accurately and multiple strokes over the surface do not cause gaps and alignment artifacts of the device.

5.1.2 The solution to this problem proposed in claim 8 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

According to document D1, the position indicators are printed on the writable medium independently from the printing operation of the image (first, the position indicators are printed on the writable medium by the printer and after that the image information); the definition of the filed claim 8, however, specifies that (the second portion of) the image is printed including the second position indicator (that is embedded in the image data).

According to document D2, position indicators and image data are printed, however, the raster of position indicators is stored in the printer before the printing operation and not adjusted during the printing process; therefore, the image data is

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not modified to embed a (second) position indicator, as it is defined in the filed claim 8.

5.1.3 Claims 9-19 are dependent on claim 8 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

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